

What is claimed is:

- 10034379-0103002
1. A method for selectively oxidizing a silicon wafer comprises the steps of:
covering each of whole areas of both surfaces of a silicon wafer by an oxidation inhibitor film with interposition of a pad oxide film;
patterning said pad oxide film and an oxidation inhibitor film on said pad oxide film on one surface of said wafer to form desired patterns to partially expose the one surface of said wafer through said patterns;
removing said pad oxide film and said oxidation inhibitor film on said pad oxide film formed on the other surface of said wafer to expose the whole area of the other surface of said wafer;
oxidizing the regions exposed partially on the one surface of said wafer and the whole area of the other surface of said wafer simultaneously to grow a silicon dioxide film on both surfaces of said wafer; and
removing said oxide inhibitor film overlying said pad oxide film and said underneath pad oxide film remaining on the one surface of said wafer.

2. A selective oxidation method according to Claim 1, wherein said oxidation inhibitor film is a silicon nitride film.

3. A selective oxidation method according to Claim 1, wherein said pad oxide films covering both surfaces of said wafer are formed simultaneously in a batch type thermal oxidation furnace.

4. A selective oxidation method according to Claim 2, wherein said silicon nitride films covering both surfaces of said wafer with interposition of said pad oxide film are formed simultaneously by a batch type low-pressure CVD.

5. A selective oxidation method according to Claim 1 wherein said

exposed regions on the one surface of said wafer and the exposed area on the other surface of said wafer are subjected to said oxidation process by a batch type thermal oxidation furnace.

6. A selective oxidation method according to Claim 1, wherein said oxide film partially formed on the one surface of said wafer is used isolation regions.

7. A selective oxidation method according to Claim 1, wherein said oxide film formed on the whole area of the other surface of said wafer is used as a sacrifice layer to remove contamination, which occurs in handling of said wafer, by an etching process.

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